ABSTRACT

This invention provides an auxiliary material for use with a superconductive material, which auxiliary material is characterized in that MgO alone or MgO and NiO are dispersed in Ag material by internal oxidation. Here, it is preferred that a weight ratio of Ag and MgO or a weight ratio of Ag, MgO and NiO is such that MgO is 0.03 to 3.3 wt% and a balance is Ag. Alternatively, MgO is 0.01 to 1.7 wt%, NiO is 0.02 to 1.3 wt% and a balance is Ag. The auxiliary material of the present invention is manufactured by a process in which after a base material consisting of either an Ag-Mg composition or an Ag-Mg-Ni composition has been dissolved and cast, the base material, when in a process of being formed into a predetermined thickness, is subjected to an internal oxidation which is carried out at a temperature of 650 to 850°C and continued for 20 to 80 hours in an oxygen atmosphere having a pressure of 3 to 10 atm, followed by being further processed.

According to the present invention, the above described material can be used as an auxiliary material for use with a superconductive material, thereby making it possible to produce a tape-like material or a wire-like material which has an improved stability even under a severe condition of a heat energy, i.e., it will not be softened by a heat, nor will it have a reaction with a superconductive

material, thus ensuring an extremely high mechanical strength.